Signal processing unit for photodiode module

C10475

Specifically designed for photodiode modules (C10439 series)

The C10475 is a signal processing unit specifically designed to convert the output of a photodiode module (C10439 series) into digital signals. High-resolution digital output (16 bits) can be obtained through serial connection (RS-232C) to a PC. The sample software that comes with the C10475 allows easily obtaining measurement data using the PC. The measurement data can also be recorded in the internal memory (data logger function).
The C10475 can also operate on batteries for portability.

▸ Features

▸ **High-resolution digital output (16-bit)**

▸ **Data logger function**

▸ **Low battery function**

▸ **Choice of internal battery (+9 V) or AC adapter (+12 V) operation**

▸ **Supplies power to the photodiode module**

▸ Applications

▸ **Precision photometry**

▸ **Light source power monitors**

▸ **Fluorescence detection of printed matter**

▸ **Illuminometers**

▸ **Color difference meters**

▸ **Refractometers**

▸ **Flowmeters, etc.**

▸ Absolute maximum ratings (Ta=25 °C unless otherwise noted)

Parameter	Symbol	Value	Unit
Supply voltage	Vs max	+14	V
Input voltage	Vin max	±10	V
Operating temperature[1]	Topr	0 to +50	°C
Storage temperature[1]	Tstg	-10 to +60	°C

*1: No dew condensation
    When there is a temperature difference between a product and the surrounding area in high humidity environment, dew condensation may occur on the product surface. Dew condensation on the product may cause deterioration in characteristics and reliability.
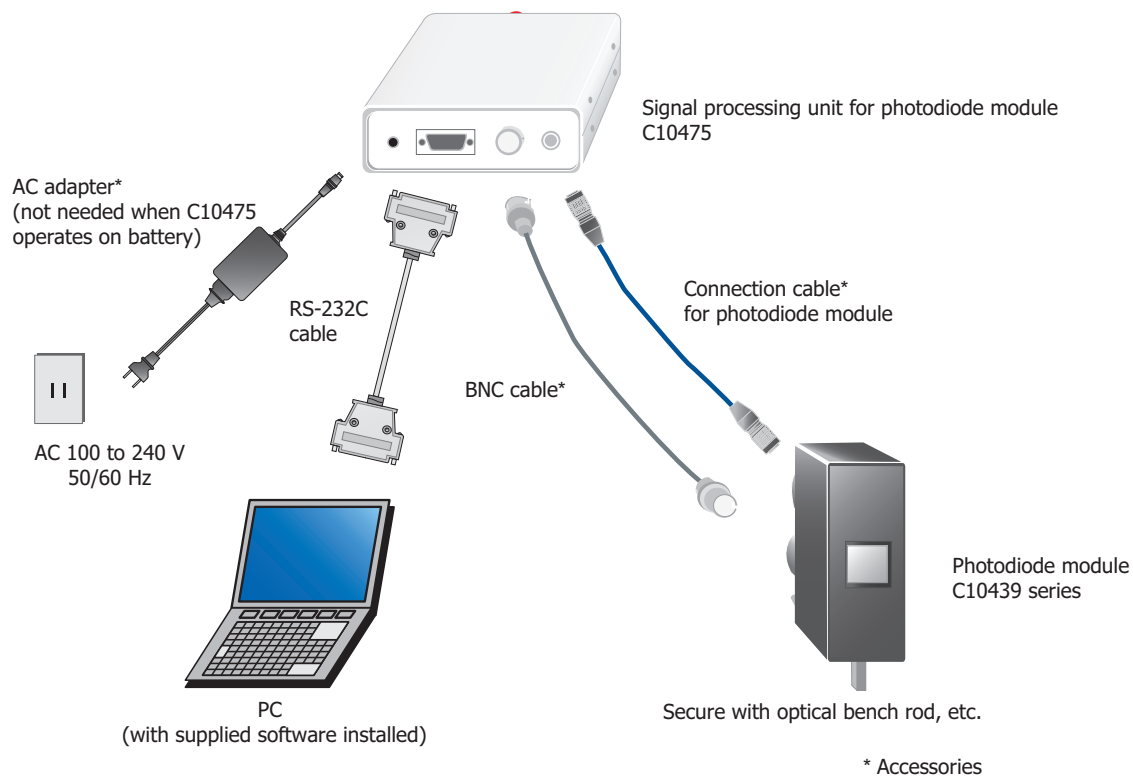Note: Exceeding the absolute maximum ratings even momentarily may cause a drop in product quality. Always be sure to use the product within the absolute maximum ratings.

▸ Specifications (Vs=+12 V, Ta=25 °C, unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Operating supply voltage	Vs	+6	+12	+14	V
Input voltage	Vin	-5	-	+5	V
Current consumption[2]	Is	-	20	-	mA
Interface	-	RS-232C, 19200 bps, 8-bit, Non-parity, 2-stop bit			-
A/D conversion cycle	-	50	-	-	ms

*2: Dark state

Connection example

AC adapter*
(not needed when C10475
operates on battery)

RS-232C cable

AC 100 to 240 V
50/60 Hz

BNC cable*

PC
(with supplied software installed)

Signal processing unit for photodiode module
C10475

Connection cable*
for photodiode module

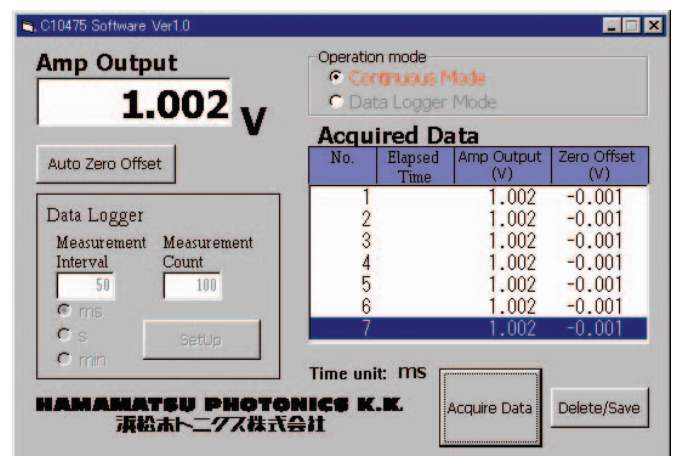Photodiode module
C10439 series

Secure with optical bench rod, etc.

* Accessories

KACCC0366EB

Sample software (accessory)

Data logger setting range
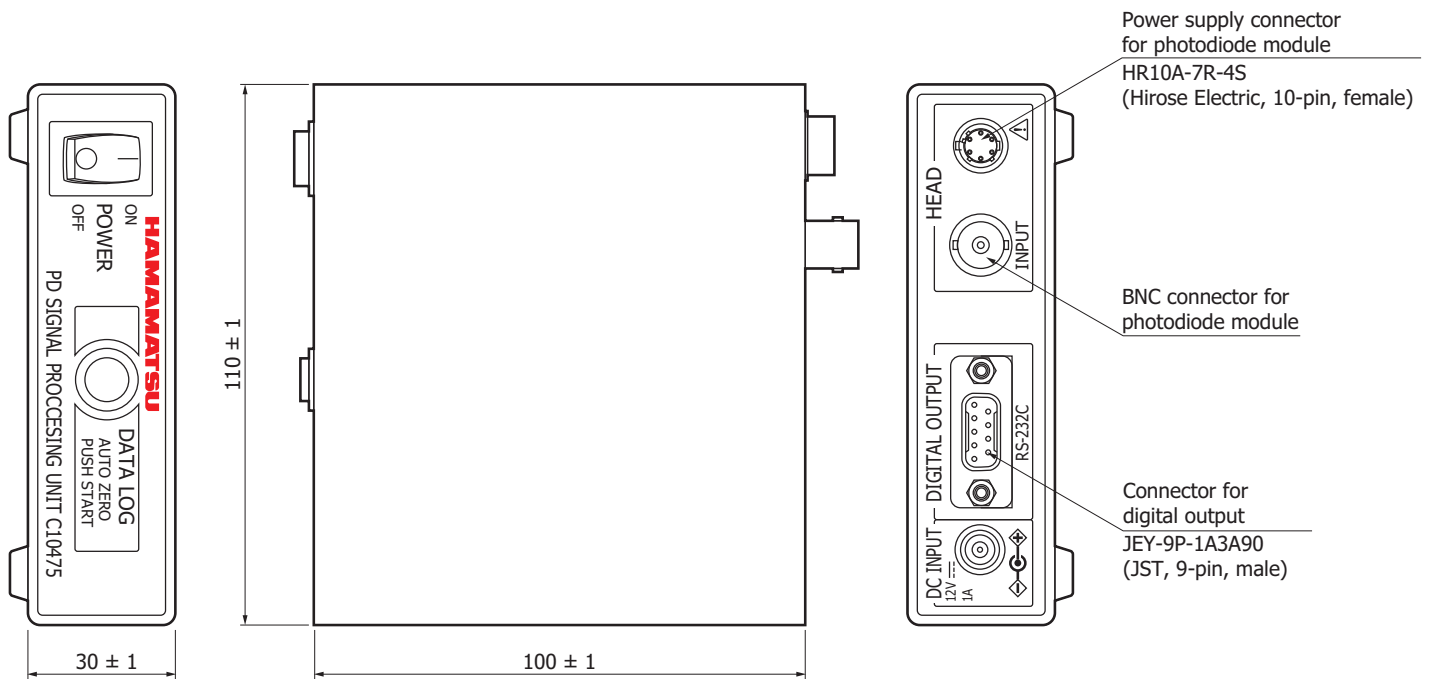Measurement interval: 50 ms to 1 min
(50 ms interval)
Measurement count: 32000 max.
Measurement interval × Meassurement count: 20 hours max.

Compatible OS: Microsoft® Windows® 7 SP1 (32-bit, 64-bit)
Microsoft Windows 8 (32-bit, 64-bit)
Microsoft Windows 10 Professional (32-bit, 64-bit)

Note: Microsoft and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/
or other countries.

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Dimensional outline (unit: mm)

Power supply connector
for photodiode module
HR10A-7R-4S
(Hirose Electric, 10-pin, female)

BNC connector for
photodiode module

Connector for
digital output
JEY-9P-1A3A90
(JST, 9-pin, male)

110 ± 1

30 ± 1

100 ± 1

POWER ON OFF

PD SIGNAL PROCCESING UNIT C10475

HAMAMATSU

DATA LOG
AUTO ZERO
PUSH START

HEAD

INPUT

DIGITAL OUTPUT

RS-232C

DC INPUT
12V
1A

KACCA0206EB

Accessories (unit: mm)

· Instruction manual
· Sample software CD-ROM
· AC adapter
· BNC cable E2573

1000^{+50}_{-0}
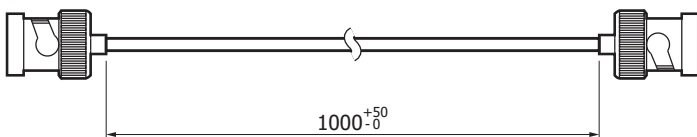
KACCA0334EA

· Cable for photodiode module

1000 ± 50

Connector HR10A-7P-4S
(Hirose Electric, 4-pin, female)

Connector HR10A-7P-4P
(Hirose Electric, 4-pin, male)
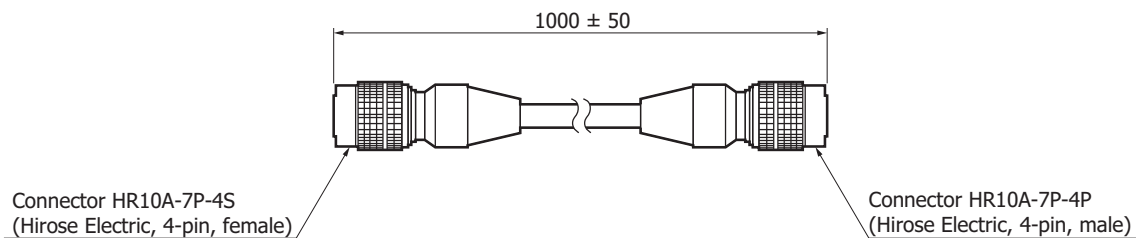
KACCA0207EB

Note: RS-232C cable is not supplied with C10475. For RS-232C cables, use a commercially available cable with 9-pin D-sub connectors (female - female, straight cable).

Related information

www.hamamatsu.com/sp/ssd/doc_en.html

■ Precautions
· Disclaimer

Information described in this material is current as of August 2019.

Product specifications are subject to change without prior notice due to improvements or other reasons. This document has been carefully prepared and the information contained is believed to be accurate. In rare cases, however, there may be inaccuracies such as text errors. Before using these products, always contact us for the delivery specification sheet to check the latest specifications.

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